

# OSDL Japan Linux Symposium – Hot Topics

## Virtualization

---

Norio Kurobane  
kurobane.norio@jp.fujitsu.com

# Virtualization: Latest Upstream in Platform

- Welcomed by many users of all kind of computers
  - Desktops, servers and laptops
  - Built-in such as cell phone in future
- Dramatic improvement at;
  - Efficient usage of hardware resources
  - Ease at use
- Many developers are interested in Xen
  - Many developers from Japan, some of them at Xen summit
- Benefits in magazines and webs repeatedly
- Today, share the perspective of development



# Terminology

- Dom0
- DomU
- Hypervisor
  
- Para-virtualized OS
- Full-virtualized OS/  
non-modified OS
  
- Para-driver
- Full-virtualized driver

Figure of the Doms, drivers and H/W to be here



# Make Xen More Popular/Common

- Status Update of Development
- What Next from View Point of Users (details later)
  - VMI
  - Full-virtualization vs. Para-virtualization
  - Cover More Platforms
- Expectation to Linux from Xen, Vice Versa



# VMI

- VMI at virtualization
  - Similar role as API of OS
- Wish
  - VMI for all OSes (Not limited to Linux, but also W\*ndows, BSD)
- Q
  - How is VMI standardized?
    - ex. Codes posted by VMware and Xen
  - What is the next step?



# Full-virtualization vs. Para-virtualization

- Currently Xen seems focusing on para-virtualization
- Wish
  - Para-virtualization is key for performance
  - At the same time, strong support of full-virtualization for existing OSes and existing device drivers needed
    - Existing OSes including Linux don't have para-virtualization capability
    - Device drivers like the following need to be cared
      - Existing drivers for non-class devices including Linux
      - Even for class devices, drivers of ancient OSes (not including Linux hopefully)



# Cover More Platforms

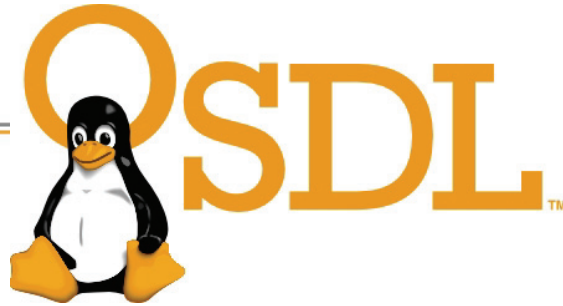
- Currently Xen seems focusing on x86
  - Activity for some platforms other than x86 is proving Xen has good potential at covering many platforms
- Wish
  - Strong support of arch transparency
  - Easy implementation under /arch



# Expectation to Linux from Xen, Vice Versa

- Many developers and users are much interested in Xen and eager to contribute
- Previous slides is a very small part of a long wish list in the world
- For the steady and rapid progress in virtualization, 'd like to suggest discussion on;
  - Roadmap in developers mind
  - Cover all OSes and more hardware platforms
  - Expectation to Linux from Xen, Vice Versa





# OSDL Japan Linux Symposium – Hot Topics

## Virtualization

---

Norio Kurobane,  
[kurobane.norio@jp.fujitsu.com](mailto:kurobane.norio@jp.fujitsu.com)